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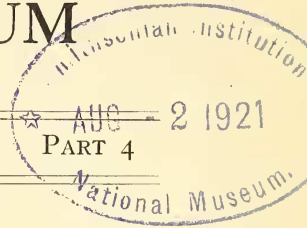
VAN HET

TRANSVAAL MUSEUM

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VOL. 7



DESCRIPTIONS OF NEW SPECIES OF *ZONURUS*,  
AND NOTES ON THE SPECIES OF *ZONURUS*  
OCCURRING IN THE TRANSVAAL

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With 4 plates.

*Zonurus breyeri* sp. nov. Plates I and II.

Description based on one holotype and three paratypes.

Head slightly longer than broad, strongly depressed. Head shields rugose; frontonasal about as broad as long, in contact with the rostral, separating the nasals, latter slightly swollen, nostrils in the posterior part of the nasal; praefrontals in contact with their inner angles; frontal hexagonal, slightly widened anteriorly; frontoparietals about as long as broad; interparietal between two pairs of parietals, being pointed anteriorly more sharply than posteriorly, in two specimens the interparietal touches the frontoparietals, in two other specimens it does not reach these shields, being separated from them by the first pair of parietals; posterior parietals larger than the anterior ones; six occipital spines, the outer ones largest and gradually getting smaller towards the middle, the middle pair very small; temporals large, keeled, five slightly curved irregular temporal spines on each side, the first or second lowest nearly as large or as large as the outer occipitals; four supraoculars, the anterior one longest, the second one broadest; four to five supraciliaries; lower eyelid opaque; loreal and praeocular large; four suborbitals; rostral twice and a half as broad as deep, five upper labials, fourth and fifth separated by a suborbital shield; six lower labials, fifth and sixth keeled, bordered below by four large shields and one small one; small irregular chin shields; gular scales small, obtusely keeled; larger irregular scales under the neck; sides of neck with irregular erect spines. Dorsal scales large, forming regular transverse series, hardly keeled in the middle but more and more towards the sides, spinose on the sides, 24-26 transverse series (from occiput to base of tail) of about 18 scales. Ventrals quadrangular, mostly broader than long, smooth, the outer ones slightly keeled, forming 10-12 longitudinal and 24-26 transverse series. A pair of feebly enlarged praeanal plates, with smaller ones in

front and on the sides. Limbs above with large spinose imbricate keeled scales; about 12 femoral pores on each side. Tail with whorls of large spinose scales, separated from each other by whorls of smaller scales; lateral caudal scales very large, strongly spinose and horizontal; lower caudal scales long, narrow, pentagonal, smooth. Colour: head, brownish-black above, much lighter and yellowish under the chin, back more brownish than head, becoming lighter towards the sides, which are yellowish-brown; belly, slate-grey becoming lighter and more tinged with brown towards neck and anus. Tail, greyish-brown above, lighter brown to yellowish on the sides, underneath slightly lighter than above.

In younger specimens several scales on the back and sides are nearly yellow, forming more or less transverse series from occiput to base of tail; several of the lateral caudal scales yellowish, and also some of the legs.

	millim.		millim.
Total length ...	275	Fore limb ...	41
Head ...	32	Hind limb...	60
Width of head ...	29	Tail ...	155
Body ...	88		

Holotype, a full-grown female, No. 3769, Cat. Lizards; paratypes, three nearly adult specimens, Nos. 3770, 3771, 3768, Cat. Lizards. Locality: Geelhoutkop (Driefontein), Waterberg Dist., Transvaal. Coll. by G. P. F. van Dam, and Dr H. G. Breyer, Jan. 1918.

This species is closely related to *Z. giganteus* Smith, from which it differs chiefly in size, number and length of the occipital spines. The tail with whorls of smaller scales separating the whorls of large spinose scales, these whorls of small scales being absent in *Z. giganteus*.

The new lizard occurs amongst rocks on the farm Geelhoutkop, about 45 miles north of Nylstroom. Geelhoutkop is the highest point in the vicinity (approximately 5000 ft.).

The holotype specimen is a large female. It was caught in Jan. 1918. On opening it was found to contain six young ones, of which five were preserved. Their length was as much as 90 mm. The unborn young differs from the adult in the following points: head shields smooth; occipitals not sharply pointed, but only keeled. Dorsal scales strongly keeled in the middle as well as on the sides. The whorls of small scales between the whorls of large spinose scales of the tail can be distinctly seen from above, but not from underneath, being hidden by the lateral spines and those below.

*Zomurus barbertonensis* sp. nov. Plate III.

Head longer than broad, strongly depressed. Head shields rugose; fronto-nasal slightly broader than long, in contact with the rostral, separating the nasals, latter slightly swollen, nostrils in the posterior part of the nasal; prae-frontals in contact at their inner angles; frontal hexagonal, slightly widened anteriorly; frontoparietals slightly broader than long; interparietal between four parietals, being pointed anteriorly more sharply than posteriorly; posterior parietals larger than the anterior ones; six occipital spines, the outer ones shorter than the second, second pair longest, narrowest, the middle pair shortest and broadest; temporals large, keeled, five temporal spines on each side; four supraoculars, the anterior one longest, the second one broadest; four supraciliaries; lower eyelid opaque; loreal and praeocular large; four to five suborbitals; rostral twice and a half as broad as deep, six upper labials, fourth and fifth separated by a suborbital shield; six lower labials, fifth and sixth keeled, bordered below by five large shields; small irregular chin shields;

gular scales small, larger irregular scales under the neck, sides of neck with irregular erect spines. Dorsal scales large, forming regular transverse series, keeled towards the middle, spinose on the sides, 30-32 transverse series (from occiput to base of tail) of 20 scales. Ventrals quadrangular, mostly broader than long, smooth, the outer ones slightly keeled, forming 14 longitudinal and 34-36 transverse series; a pair of feebly enlarged praeanal plates, with smaller ones in front and on the sides. Limbs above with large spinose keeled scales; 10-12 femoral pores on each side. Tail with whorls of large spinose scales, separated from each other by whorls of smaller scales; lateral caudal scales large, strongly spinose, lower caudal scales long, narrow, pentagonal, slightly keeled. Colour: blackish above, with yellowish spots, forming more or less regular transverse series; belly, brownish with yellowish spots.

	millim.		millim.
Total length ...	312	Fore limb ...	43
Head ...	36	Hind limb...	64
Width of head ...	30	Tail ...	174
Body ...	102		

Type, one adult specimen from Barberton, Transvaal. Collected by G. P. F. van Dam, and A. Roberts, March, 1920.

This species differs from *Z. breyeri* and *Z. warreni*, in size of the occipital spines, and number of transverse series of dorsal scales.

The Transvaal Museum possesses also two young specimens from the same locality.

#### *Zonurus robertsi* sp. nov. Plate IV.

Description based on one holotype and one paratype.

Head depressed, triangular in shape, much longer than broad. Head shields slightly rugose; nasals not swollen, in contact with each other, pierced posteriorly; frontonasal hexagonal, about as long as broad, sometimes the posterior part is in contact with the frontal; praefrontals in contact at their inner angles, or separated by the anterior point of the frontal and the posterior part of the frontonasal; frontal hexagonal, the anterior point sometimes in contact with the frontonasal shield; frontoparietals about as long as broad, or slightly longer than broad; interparietal small, between two pairs of parietals; posterior parietals slightly larger than the anterior ones; neck much narrower than hind head, above, behind the head, covered with small irregular scales and granules; temporals large, in three longitudinal rows; four supraoculars; four to five supraciliaries; lower eyelid opaque; loreal and praeocular large, four suborbitals; rostral nearly three times as broad as high; 5-6 upper labials, fourth and fifth, or fifth and sixth, separated by a suborbital shield; 6-7 lower labials, bordered below by four large shields and one small one; irregular chin shields; gular scales small, those in the centre largest, and gradually getting smaller towards the sides; moderately large, irregularly arranged scales under the neck; sides of neck folded, granular; dorsal scales soft, and intermixed with small scales and granules, forming regular transverse series, the two median rows large, slightly rugose, quadrangular, and with a distinct keel, those towards the sides slightly rugose, quadrangular or pentagonal, about half the size of the two median rows, mostly distinctly keeled, the keel of the last row very distinct, in 12-14 longitudinal (counting over the middle of the back) and 42-46 transverse series (from middle of neck to base of tail); sides of body covered with very small roundish scales and granules; ventrals large, broader than long, square, smooth, juxtaposed, forming eight

longitudinal and 26–28 transverse series; a pair of enlarged praeanal plates, with smaller ones in front and on the sides. Limbs above covered with imbricate keeled scales; 16–18 femoral pores on each side. Tail with whorls of strongly keeled scales, lateral caudal scales spinose, lower caudal scales long, narrow, quadrangular, those near the anus smooth, but more and more strongly keeled towards the tip of the tail. Colour: dark brown above, some of the scales with yellowish spots; belly and head below, dark grey.

	millim.		millim.
Total length	... 267	Fore limb ...	... 41
Head	... 30	Hind limb...	... 66
Width of head	... 21	Tail	... 169
Body	... 68		

Holotype, a full-grown specimen, No. 3747, Cat. Lizards; paratype, a nearly adult specimen, No. 3748, Cat. Lizards.

This species is closely related to *Z. capensis* Smith; from which it differs chiefly in the number and size of dorsal scales. Locality: Klaver, van Rhynsdorp Dist., C.P. Collected by Messrs A. Roberts and A.A. Adendorff, Sept. 1917.

The Transvaal Museum possesses also five young and nearly full-grown specimens from the same locality.

The genus *Zonurus* is represented by three species in the Transvaal, besides the two species described above, namely:

1. *Zonurus giganteus* Smith. We have the species from near Paardekop Station (Standerton Dist., Transvaal), Zandspruit near Wakkerstroom (Transvaal), Schaapplaats (Vereeniging), Kroonstad, Bloemfontein.

2. *Zonurus vittifer* is common in the immediate neighbourhood of Pretoria, but only on rocky kopjes, where it lives in rock crevices and under stones. In our collection we have specimens from the following localities:

Pretoria and Dist., Zuurfontein near Johannesburg, Orange Grove near Johannesburg, Frederikstad, Townkloof (Rustenburg), Groenkloof (Rustenburg Dist.), Doornkop (Witpoort, *via* Belfast), Wakkerstroom, Weenen (Natal), Arnheburg (Carolina), Woodbush, Shilowane, Metlepetsi Riv. (Zoutpansberg Dist.), near Makapans Caves (Potgietersrust), Selati, Haenertsburg (Zoutpansberg Dist.).

This species is wrongly placed as a synonym of *Z. cordylus* in Mr Boulenger's list, published in the *Ann. S. African Mus.* vol. v. part ix. p. 468. It differs from *Z. cordylus* as known to me from the Cape, Grahamstown, Paarl, Port Elizabeth, East London C.P., constantly in various points. In order to make sure, I carefully inspected all our specimens of these species, 65 *Z. vittifer* and 60 *Z. cordylus*, and am now able to show these differences in the following table:

<i>Zonurus vittifer</i> Reich.	<i>Zonurus cordylus</i> Linn.
Frontonasal shield usually of irregular size or absent.	Frontonasal shield usually large.
Scales of the second row immediately posterior to the parietals regular longitudinal elongated, followed by rows of shorter shields.	No such regular large shields.
Dorsal shields, 22–24 longitudinal series, 20–25 transverse series from occiput to base of tail.	Dorsal shields, 16–18 longitudinal series, 26–28 transverse series from occiput to base of tail.
Ventral shields in 14–16 longitudinal rows.	Ventral shields in 10–14 longitudinal rows.

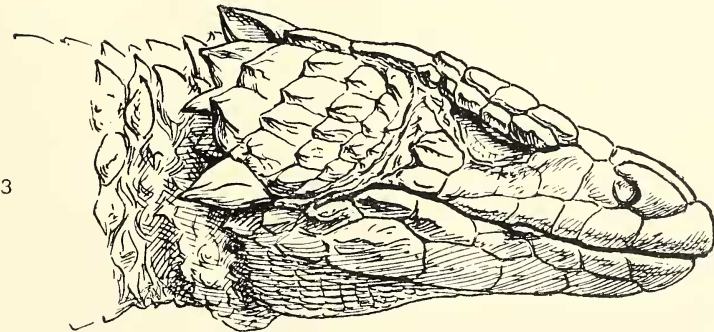
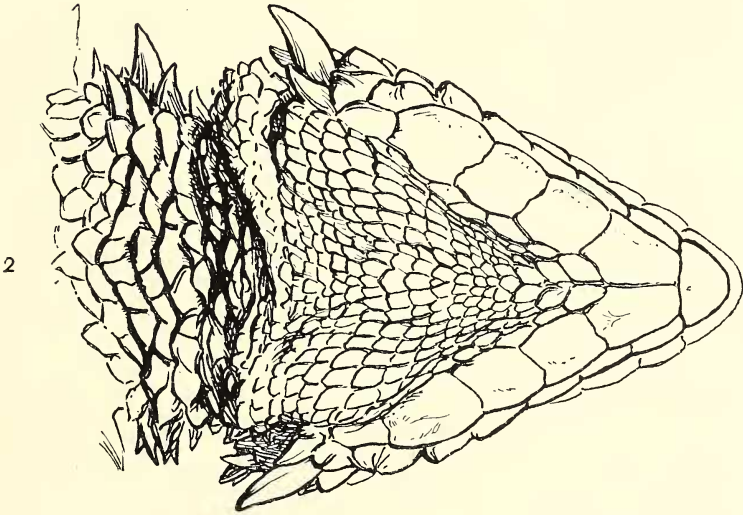
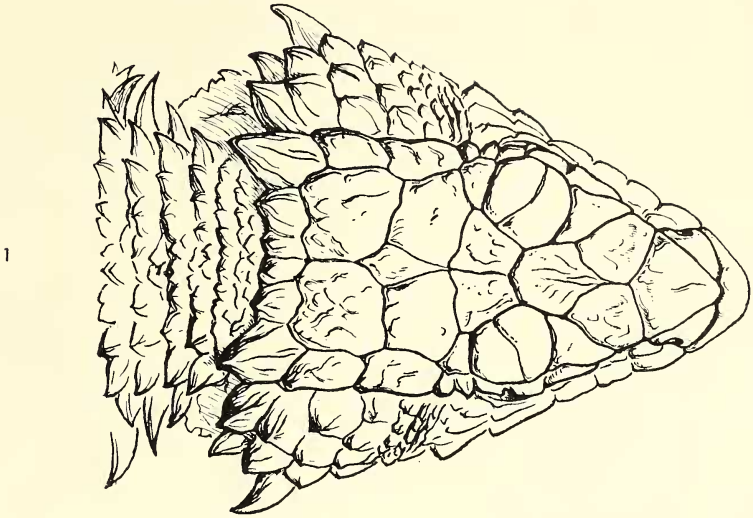


In *Z. vittifer* the second row of shields immediately posterior to the parietals, which looks more or less like a collar, distinguishes the two species at once.

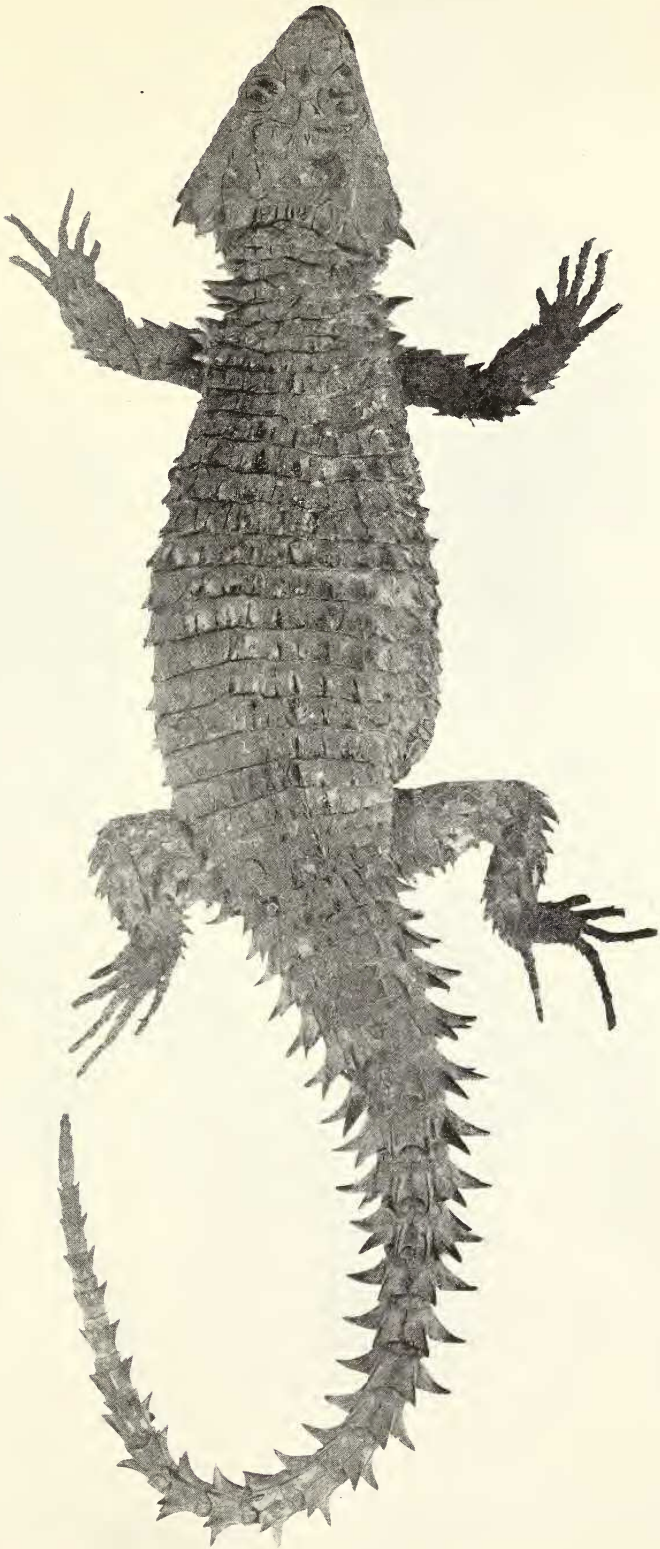
A related form from Barberton has been described by Boulenger as *Z. tropidogaster*. After examining a large series of *Z. vittifer* Reich. from various localities in the Transvaal, also one young and one nearly adult specimen from the type locality of *Z. tropidogaster* (Barberton), I am inclined to agree with Hewitt that this is only a form of *Z. vittifer* (see *Ann. Transvaal Mus.* vol. III. No. 1, p. 47, April, 1911). The frontonasal shield in *Z. vittifer* in our large series is of irregular size, large, very small, or absent; in three specimens from Wakkerstroom the frontonasal shield is absent, and in another three specimens from the same locality present. The character of the frontonasal shield proves therefore not to be constant in *Z. vittifer*; in other respects *Z. tropidogaster* agrees well with the description of *Z. vittifer*, and as the distinction of *Z. tropidogaster* seems to depend upon the character of the frontonasal, this supposed species does not appear to be valid and is a synonym of *Z. vittifer*, which Boulenger has wrongly placed as a synonym of *Z. cordylus*.

3. *Zonurus jonesi* Blgr. is represented in our collection from the following localities:

Lydenburg, Leydsdorp, Griffin Mine near Leydsdorp, Makoutsi Riv. about 28 miles S.S.W. of Leydsdorp, Maiepo about 25 miles N. of Gravelotte, Shiny about 28 miles E. of Gravelotte (Ward Low Country), Silwane (Ward Low Country), Selati, Hectorspruit, Pongola Riv. (Waterberg Dist.), Geelhoutkop (Waterberg Dist.), Bridge Water (Rustenburg Dist.), Hornsnek (Pretoria Dist.), Mazambo (Portuguese S.E. Africa), near Lundi Riv. (S.E. Rhodesia). The Griffin Mine specimens have been found by me; they were taken from under the bark of a dead tree and from the hollow trunk of a living tree, both standing in cultivated lands.



*Zonurus breyeri* sp. nov.



*Zonurus breyeri* sp. nov



*Zomurus barbertonensis* sp. nov.





*Zonurus robertsi* sp. nov.